

Contents

Number 1 July 1993

Editorials

- Pericardium in Valve Operations** 1
 Carlos M. G. Duran, MD, PhD
- Blood Conservation and Blood Transfusion Practices: Flip Sides of the Same Coin** 3
 Lawrence Tim Goodnough, MD
- Modified Arch Anastomosis for Interrupted Aortic Arch** 5
 Richard A. Jonas, MD

Original Articles

- Late Results of Mitral Valve Repair for Mitral Regurgitation Due to Degenerative Disease** 7
 Tirone E. David, MD, Susan Armstrong, MSc, Zhao Sun, MA, and Loretta Daniel, MD
- Decrease in Operative Risk of Reoperative Valve Surgery** 15
 Lawrence H. Cohn, MD, Sary F. Aranki, MD, Robert J. Rizzo, MD, David H. Adams, MD, Kimberly A. Cogswell, BS, Nancy M. Kinchla, BS, Gregory S. Couper, MD, and John J. Collins, Jr, MD
- Determinants of Survival and Recovery of Left Ventricular Function After Aortic Valve Replacement** 22
 James J. Morris, MD, Hartzell V. Schaff, MD, Charles J. Mullany, MD, Amita Rastogi, MD, Christopher G. A. McGregor, MD, Richard C. Daly, MD, Robert L. Frye, MD, and Thomas A. Orszulak, MD
- Double Cardiomyoplasty: Acute Versus Chronic Results** 31
 Renato Ruggiero, MD, Gregory A. Thomas, MD, Hiroshi Niinami, MD, Huiping Lu, MD, Timothy L. Hooper, MD, Robert L. Hammond, BA, Robert Fietsam, Jr, MD, Frank W. Mocek, MD, Hidehiro Nakajima, MD, Hisako O. Nakajima, MD, and Larry W. Stephenson, MD
- Pressure-Volume Analysis of Changes in Cardiac Function in Chronic Cardiomyoplasty** 38
 Peter W. Cho, MD, Howard R. Levin, MD, William E. Curtis, MD, Joshua E. Tsitlik, PhD, Joseph M. DiNatale, MS, David A. Kass, MD, Timothy J. Gardner, MD, Ralph W. Kunel, MD, PhD, and Michael A. Acker, MD
- Prevention of Acute Regional Ischemia With Endocardial Laser Channels** 46
 Osvaldo J. Yano, MD, Mark R. Bielefeld, MD, Valluvan Jeevanandam, MD, Michael R. Treat, MD, Charles C. Marboe, MD, Henry M. Spotnitz, MD, and Craig R. Smith, MD

Right Ventricular Dynamics During Left Ventricular Assistance in Closed-Chest Dogs	54
Marc R. Moon, MD, Luis J. Castro, MD, Abe DeAnda, MD, Yasuko Tomizawa, MD, PhD, George T. Daughters II, MS, Neil B. Ingels, Jr, PhD, and D. Craig Miller, MD	
Long-Term Functional Results After Bilateral Lung Transplantation	68
Claire Dromer, MD, Jean-François Velly, MD, Jacques Jougon, MD, Christian Martigne, MD, Eugène M. Baudet, MD, Louis Couraud, MD, and the Bordeaux Lung and Heart-Lung Transplant Group	
Regression of Bronchial Epithelial Cancer in Hamsters	74
Russell W. Sawyer, MD, William G. Hammond, MD, Raymond L. Teplitz, MD, and John R. Benfield, MD	
Idiopathic Laryngotracheal Stenosis and Its Management	80
Hermes C. Grillo, MD, Eugene J. Mark, MD, Douglas J. Mathisen, MD, and John C. Wain, MD	
Stentless Aortic Bioprosthesis? The Way Forward: Early Experience With the Edwards Valve	88
Ravi Pillai, FRCS, David Spriggings, MRCP, Naomali Amarasena, MRCP, David J. O'Regan, FRCS, Andrew J. Parry, FRCS, and Stephen Westaby, FRCS	
Thoracoscopic Diagnosis and Treatment of Mediastinal Masses	92
John A. Kern, MD, Thomas M. Daniel, MD, Curtis G. Tribble, MD, Mark L. Silen, MD, and Bradley M. Rodgers, MD	
Thromboxane A₂: An Endothelium-Derived Vasoconstrictor in Human Internal Mammary Arteries	97
Pyng Jing Lin, MD, Chau-Hsiung Chang, MD, Paul J. Pearson, MD, PhD, Kai-Yuan Tzen, MD, Jaw-Ji Chu, MD, Jen-Ping Chang, MD, and Ming-Jang Hsieh, MD	
Preoperative Use of Erythropoietin for Cardiovascular Operations in Anemia	101
Toshio Konishi, MD, Tamiyuki Ohbayashi, MD, Tatsuo Kaneko, MD, Toshihide Ohki, MD, Yuji Saitou, MD, and Yasumasa Yamato, MD	
Effect of Age and Preoperative Airway Obstruction on Lung Function After Coronary Artery Bypass Grafting	104
Gary W. Wahl, MD, Andrew J. Swinburne, MD, Anthony J. Fedullo, MD, David K. P. Lee, MD, and David Shayne, RRT	
Surgical Glove Punctures During Cardiac Operations	108
Poo Sing Wong, FRCS(Ed), Vincent K. Young, FRCS(I), Aprim Youhana, FRCS(Ed), and John E. Wright, FRCS	
Damus-Stansel-Kaye Procedure: Current Indications and Results	111
Richard N. Gates, MD, Hillel Laks, MD, Amir Elami, MD, Davis C. Drinkwater, Jr, MD, Jeffrey M. Pearl, MD, Barbara L. George, MD, Jay M. Jarmakani, MD, and Roberta G. Williams, MD	

Acquired Segmental Emphysema: The Enlarging Spectrum of Swyer-James/Macleod's Syndrome 120

Sunil K. Ohri, FRCS, Guy Ruddy, MB, BS, and S. William Fountain, FRCS

Geometry of Homograft Valve Leaflets: Effect of Dilation of the Aorta and the Aortic Root 125

Katharine J. Lockie, BEng, Maya Butterfield, MSc, John Fisher, PhD, Neal P. Juster, PhD, Kevin Watterson, FRCS, and Gwilym A. Davies, FRCS

Mitroflow Pericardial Valve: Long-Term Durability 131

Daniel Y. Loisanche, MD, Jean-Philippe Mazzucotelli, MD, Patrick C. Bertrand, MD, Philippe H. Deleuze, MD, and Jean-Paul Cachera, MD

Prospective, Randomized Trial of Autotransfusion After Routine Cardiac Operations 137

Herbert B. Ward, MD, PhD, Robin R. A. Smith, BSN, Karen P. Landis, BAN, Timothy G. Nemzek, MS, Agustin P. Dalmasso, MD, and William R. Swaim, MD

Repair of Interrupted Aortic Arch With an Augmented Aortic Anastomosis 142

Charles A. Dietl, MD, and Alberto R. Torres, MD

Femoral Veno-Arterial Extracorporeal Life Support With Minimal or No Heparin 149

Sary F. Aranki, MD, David H. Adams, MD, Robert J. Rizzo, MD, Gregory S. Couper, MD, Malcolm M. DeCamp, MD, Daniel J. Fitzgerald, CCP, and Lawrence H. Cohn, MD

Case Reports

Direct-Current Injury From External Pacemaker Results in Tissue Electrolysis 156

Eugene A. Grossi, MD, Michael A. Parish, MD, Michael R. Kralik, MD, Lawrence R. Glassman, MD, Rick A. Esposito, MD, Greg H. Ribakove, MD, Aubrey C. Galloway, MD, and Stephen B. Colvin, MD

Lower Extremity Ischemia Secondary to Internal Thoracic-Coronary Artery Bypass Grafting 157

Soichiro Kitamura, MD, Kiyoshi Inoue, MD, Kanji Kawachi, MD, Ryuichi Morita, MD, Toshio Seki, MD, Shigeki Taniguchi, MD, and Tetsuji Kawata, MD

Successful Reconstruction for Combined Tracheal and Bronchial Disruption 160

Shigemi Ishikawa, MD, Masataka Onizuka, MD, Yuji Matsumaru, MD, Takashi Yamada, MD, Atsuro Tsukada, MD, Kiyofumi Mitsui, MD, and Motokazu Hori, MD

Monocusp Homograft VSD Patch in Atrioventricular Canal With Tetralogy of Fallot 161

Stephen Westaby, FRCS

Straddling Endoventricular Pericardial Patch in Prevention of Type I Myocardial Rupture 163

Vincenzo Arena, MD, Francesco Alamanni, MD, Alberto Repossini, MD, Silvia Di Matteo, MD, Carlo Antona, MD, and Paolo Biglioli, MD

Sternal Cleft Associated With Vascular Anomalies and Micrognathia	165
Miralem Pasic, MD, ScD, Thierry Carrel, MD, Martin Tönz, MD, Urs Niederhäuser, MD, Ludwig K. Von Segesser, MD, and Marko I. Turina, MD	
Successful Balloon Mitral Commissurotomy in a Small Child: Use of Small Inoue Balloon Catheter	168
Toshihiro Ino, MD, Shinjiro Shimazaki, MD, Masazumi Iwahara, MD, Eiji Miyazaki, MD, Keijiro Yabuta, MD, and Kanji Inoue, MD	
Coronary Artery Spasm After Aortic Valve Replacement	170
Koki Tsuchida, MD, Takahiro Takemura, MD, Mikihiro Kijima, MD, and Shuichi Matsumoto, MD	
Heart-Lung Transplantation Combined With Correction of Interrupted Aortic Arch	173
Asif Hasan, FRCS, John Au, FRCS, Alan J. B. Kirk, FRCS, Brian Glenville, FRCS, Colin J. Hilton, FRCS, and John H. Dark, FRCS	
Left Ventricular False Aneurysm Complicating Mitral Valve Repair	175
Robert Chan, MBBS, Serge Lubicz, FRACS, Leslie Oliver, FACC, and Paul Calafiore, FRACP	
Fungal Infection of the Contralateral Native Lung After Single-Lung Transplantation	176
John C. McDougall, MD, Wickii T. Vigneswaran, FRCS, Steve G. Peters, MD, William T. Marshall, MD, and Christopher G. A. McGregor, FRCS	
<i>How to Do It</i>	
Truly Flexible D-Shaped Autogenous Pericardial Ring for Mitral Annuloplasty	179
Solomon Victor, FRCP, and Vijaya M. Nayak, MS	
Retrocaval Routing of the Right Internal Thoracic Artery	181
Michael B. Pliam, MD, PhD, and Alex Zapolanski, MD	
Use of Bachmann's Bundle for Bipolar Atrial Pacing	183
Michael A. Savitt, MD, and J. Scott Rankin, MD	
A Cost-Effective Dacron Annuloplasty Ring	185
Denton A. Cooley, MD, Robert T. Baldwin, MD, and Susan Wilansky, MD	
<i>Our Surgical Heritage</i>	
Evolution of Aortic Valve Replacement for Native Aortic Valve Endocarditis	187
Richard L. Prager, MD	
<i>Current Review</i>	
Postpneumonectomy Pulmonary Edema	190
Oz M. Shapira, MD, and David M. Shahian, MD	

Key References

- Surgical Treatment of Bullous Emphysema** 196
Jean Deslauriers, MD

Correspondence

- Aprotinin Therapy for Reoperative Myocardial Revascularization: An Opposing View** 198
Jean-François Hardy, MD, and Sylvain Belisle, MD

- Warm Heart Operation for Acute Ischemia** 198
Louis A. Brunsting, MD, Joseph R. Van Camp, MD, and Steven F. Bolling, MD
Reply
W. Morris Brown III, MD, John Parker Gott, MD, and Robert A. Guyton, MD

- Video-Assisted Thoracic Surgery** 199
Robert L. Thurer, MD

- Unusual Complication of Temporary Pacing Wires in Children** 200
Takaaki Sugita, MD, Fumitaka Ando, MD, Fumio Okamoto, MD, Tadashi Ikeda, MD, Shigehiro Ohtani, MD, Koji Nakanishi, MD, and Katsushi Oda, MD
Reply
Joe W. R. Bolton, MD, and John E. Mayer, Jr, MD

- International Cardiothoracic Surgeon** 201
Rubén Jaén C., MD

- Normothermic Cardiopulmonary Bypass** 202
Ulrik Hvass, MD, and Jean-Paul Depoix, MD
Reply
George T. Christakis, FRCS(C)

- Invasive Thymoma With Intracaval Growth Into the Right Atrium** 203
Luc Missault, MD, Peter Gheeraert, MD, Bernard Cambier, MD, Annick Brandt, MD, Luc Adang, RN, and Denis Clement, MD, PhD
Reply
Kohei Yokoi, MD, Naoto Miyazawa, MD, Kiyoshi Mori, MD, and Keigo Tominaga, MD

- Pericardial Flap and Resternotomy Injury** 204
Robert R. Klingman, MD, William R. Berry, MD, and Victor A. Ferraris, MD, PhD
Reply
Charles C. Canver, MD

Announcements

Information for Authors	A-25, 26
Guidelines for the Submission of Electronic Manuscripts	A-27
Events of Interest	A-28, 29
Forthcoming Articles	A-30
Notice to Readers of <i>The Annals of Thoracic Surgery</i>	79
The Society of Thoracic Surgeons: Thirtieth Annual Meeting	136
Southern Thoracic Surgical Association: Fortieth Annual Meeting	155
Notice From the American Board of Thoracic Surgery	178, 184
Call for Abstracts, The Society of Thoracic Surgeons	A-31, 32
Classified Advertisements	A-33, 34
Index to Advertisers	A-36

Number 1	July 1993 Supplement	S1
Introduction		
Richard E. Clark, MD		
Comparative Pharmacology of the Thyroid Hormones		S2
Edward Sypniewski, PharmD		
Cardiac Function in Thyroid Disease: Clinical Features and Management Considerations		S9
Wolfgang H. Dillmann, MD		
Acute Cellular Actions of Thyroid Hormone and Myocardial Function		S16
Paul J. Davis, MD, and Faith B. Davis, MD		
Triiodothyronine, β-Adrenergic Receptors, Agonist Responses, and Exercise Capacity		S24
Wade H. Martin III, MD		
Cardiopulmonary Bypass and Thyroid Hormone Metabolism		S35
Richard E. Clark, MD		
Implications of Triiodothyronine Administration Before Cardiac and Noncardiac Operations		S43
Edward Lowenstein, MD		
Prevalence and Clinical Implications of Abnormal Thyroid Hormone Metabolism in Advanced Heart Failure		S48
Michele A. Hamilton, MD		
Studies on the Use of Thyroid Hormone and a Thyroid Hormone Analogue in the Treatment of Congestive Heart Failure		S54
Eugene Morkin, MD, Gregory D. Pennock, MD, Thomas E. Raya, MD, Joseph J. Bahl, PhD, and Steven Goldman, MD		

Acute Effects of Triiodothyronine on Arterial Smooth Muscle Cells	S61
Kaie Ojamaa, PhD, Cheryl Balkman, MS, and Irwin L. Klein, MD	
Concluding Remarks	S68
Irwin L. Klein, MD	

Number 2 August 1993

Editorials

Halfway Technology Takes Another Step Forward	205
Robert S. Benjamin, MD	
Electrical Therapy of Ventricular Arrhythmias: The Surgeon's Approach	206
Andrew H. Foster, MD	
Heart-Lung Transplantation: Consensus, Experience, or Both?	208
Bruce A. Reitz, MD	

Original Articles

Isolated Single-Lung Perfusion With Doxorubicin Is Pharmacokinetically Superior to Intravenous Injection	209
Benny Weksler, MD, Bruce Ng, BS, Jeffrey T. Lenert, MD, and Michael E. Burt, MD, PhD	
Effects of Triiodothyronine Supplementation After Myocardial Ischemia	215
Cornelius M. Dyke, MD, Mai Ding, MD, Anwar S. Abd-Elfattah, PhD, Kathy Loesser, PhD, Rebecca J. Dignan, MD, Andrew S. Wechsler, MD, and David R. Salter, MD	
Thromboembolism in Patients Undergoing Thoracotomy	223
Stanley Ziomek, MD, Raymond C. Read, MD, H. Gareth Tobler, MD, James E. Harrell, Jr, MD, John C. Gocio, MD, Louis M. Fink, MD, Timothy J. Ranval, MD, Ernest J. Ferris, MD, David L. Harshfield, MD, David R. McFarland, MD, Robert F. Schaefer, MD, Gary L. Purnell, MD, and Robert W. Barnes, MD	
Replacement of the Aortic Valve With Cryopreserved Aortic Allograft	228
Donald B. Doty, MD, Guido Michielon, MD, Nai-Dong Wang, MD, A. Steven Cain, MD, and Roger C. Millar, MD	
Endothelial Cell Replication in an In Vivo Model of Aortic Allografts	237
Flavian M. Lupinetti, MD, Thomas T. Tsai, and James M. Kneebone, MS	
Linear Left Ventricular Aneurysmectomy: Modern Imaging Studies Reveal Improved Morphology and Function	242
John A. Elefteriades, MD, Lawrence W. Solomon, BA, Ana M. Salazar, MD, William P. Batsford, MD, John C. Baldwin, MD, and Gary S. Kopf, MD	

Pulmonary Arteriovenous Malformations: Therapeutic Options	253
John D. Puskas, MD, Mark S. Allen, MD, Ashby C. Moncure, MD, John C. Wain, Jr, MD, Alan D. Hilgenberg, MD, Cameron Wright, MD, Hermes C. Grillo, MD, and Douglas J. Mathisen, MD	
Reoperations After Operation on the Thoracic Aorta: Etiology, Surgical Techniques, and Prevention	259
Thierry Carrel, MD, Miralem Pasic, MD, Rolf Jenni, MD, Tengis Tkebuchava, MD, and Marko I. Turina, MD	
Brain Protection via Cerebral Retrograde Perfusion During Aortic Arch Aneurysm Repair	270
Hazim J. Safi, MD, Heather W. Brien, MD, Jeffrey N. Winter, MD, Angela C. Thomas, MS, Robert L. Maulsby, MD, Harold K. Doerr, MD, and Lars G. Svensson, MD, PhD	
Failure of the Hemashield Extension in Right Ventricle-to-Pulmonary Artery Conduits	277
Junjiro Kobayashi, MD, Carl L. Backer, MD, Vincent R. Zales, MD, Susan E. Crawford, DO, Alexander J. Muster, MD, and Constantine Mavroudis, MD	
Preliminary Results With Neoadjuvant Therapy and Resection for Esophageal Carcinoma	282
Steven J. Hoff, MD, James R. Stewart, MD, John L. Sawyers, MD, Michael J. Murray, MD, Walter H. Merrill, MD, R. Benton Adkins, MD, and David H. Johnson, MD	
Aortic Coarctation With Hypoplastic Arch in Neonates: A Spectrum of Anatomic Lesions Requiring Different Surgical Options	288
Lucio Zannini, MD, Gaetano Gargiulo, MD, Sonia Bernadette Albanese, MD, Maria Cristina Santorelli, MD, Guido Frascaroli, MD, Fernando Maria Picchio, MD, and Angelo Pierangeli, MD	
Valve Morphology in Complete Atrioventricular Septal Defect: Variability Relevant to Operation	295
Tomoharu Akiba, MD, Anton E. Becker, MD, Rodolfo Neirotti, MD, and Katsuhiko Tatsuno, MD	
Prognosis of Unsuspected but Completely Resectable N2 Non-Small Cell Lung Cancer	300
Rob J. van Klaveren, MB, Jan Festen, MD, Henk J. A. M. Otten, MB, Anton L. Cox, MD, Ruurd de Graaf, PhD, and Leon K. Lacquet, MD	
Warm Blood Cardioplegia: Ultrastructural and Hemodynamic Study	305
Oğuz Taşdemir, MD, Salih Fehmi Katırcıoğlu, MD, Deniz Süha Küçükaksu, MD, Kamil Göl, MD, Mürvet Hayran, MD, Tahsin Keçeligil, MD, Erdoğan İbrişim, MD, and Kemal Bayazıt, MD	
Subxiphoid Approach for Insertion of ICDs After Previous Median Sternotomy	312
Charles A. S. Marrin, MB, BS, Charles C. Canver, MD, Mark Greenberg, MD, Peter Holzberger, MD, Stephen K. Plume, MD, and William C. Nugent, MD	
Functional Results of Left Ventricular Reconstruction	316
Maurizio Salati, MD, Pietro Di Biasi, MD, Antonella Pajè, MD, Alessandro Cialfi, MD, Giorgio Bozzi, MD, and Carmine Santoli, MD	

Expandable Prosthesis in Right Postpneumonectomy Syndrome in Childhood and Adolescence 323

Georges Audry, MD, Patrick Balquet, MD, Marie-P. Vazquez, MP, Eric Sorrel Dejerine, MD, Armelle Baculard, MD, Michèle Boulé, MD, Alain Grimfeld, MP, and Max Gruner, MP

Phrenic Nerve Damage via a Right Thoracotomy in Older Children With Secundum ASD 328

Barbara-Anne Helps, MSc, Robert I. Ross-Russell, MD, Claire Dicks-Mireaux, MD, and Martin J. Elliott, MD

Role of Systematic Mediastinal Dissection in N2 Non-Small Cell Lung Cancer Patients 331

Kazuya Nakahara, MD, Yoshitaka Fujii, MD, Akihide Matsumura, MD, Masato Minami, MD, Meinoshin Okumura, MD, and Hikaru Matsuda, MD

Use of Intraoperative Mapping to Optimize Surgical Ablation of Atrial Flutter 337

Shigeo Yamauchi, MD, Richard B. Schuessler, PhD, Tomohide Kawamoto, MD, Todd A. Shuman, MD, John P. Boineau, MD, and James L. Cox, MD

Determinants of Heart-Lung Transplantation Outcomes: Results of a Consensus Survey 343

Roger W. Evans, PhD, Diane L. Manninen, PhD, Frederick B. Dong, AM, MBA, William H. Frist, MD, and James K. Kirklin, MD

Postcardiotomy Shock: Clinical Evaluation of the BVS 5000 Biventricular Support System 346

Robert A. Guyton, MD, Jacques P. A. M. Schonberger, MD, PhD, Peter A. M. Everts, CCP, G. Kimble Jett, MD, Laman A. Gray, Jr, MD, Isaac Gielchinsky, MD, Daniel H. Raess, MD, Gus J. Vlahakes, MD, Stephen R. Woolley, MD, Deepak M. Gangahar, MD, Hooshang Soltanzadeh, MD, William J. Piccione, MD, Cecil C. Vaughn, MD, Piet W. Boonstra, MD, and Mortimer J. Buckley, MD

Case Reports

Hemorrhage Due to Inflammatory Erosion of the Pulmonary Artery Stump in Postpneumonectomy Bronchopleural Fistula 357

Krishna Khargi, MD, Vincent A. M. Durkens, MD, Paul J. Knaepen, MD, and Aart Brutel de la Riviere, MD

Transesophageal Doppler Echocardiographic Monitoring for Malperfusion During Aortic Dissection Repair 358

Steven M. Neustein, MD, Steven L. Lansman, MD, PhD, Cid S. Quintana, MD, Robert Suriani, MD, M. Arisan Ergin, MD, PhD, and Randall B. Griepp, MD

Long-Term Palliation After Systemic-to-Pulmonary Artery Shunt Using an Internal Mammary Artery 361

Naoki Yoshimura, MD, Masahiro Yamaguchi, MD, Hidetaka Ohashi, MD, Masanao Imai, MD, Yoshihiro Oshima, MD, Yuhei Hosokawa, MD, and Hideo Tachibana, MD

Mechanical Assist Device for Right Ventricular Failure After Acute Aortic Dissection 363

Giovanni Battista Luciani, MD, Alessandro Fabbri, MD, Giuseppe Faggian, MD, Paolo Marino, MD, and Alessandro Mazzucco, MD

Combination Gastric Seromuscular Patch and Omental Pedicle Flap for Bronchial Fistula 366

Yuzuru Kamei, MD, Shigeaki Moriura, MD, Shuhei Ikeda, MD, Hidekazu Hosokawa, MD, Masafumi Hirai, MD, Kenichi Naiki, MD, Kazuo Yoshitomo, MD, Joichi Kato, MD, and Shuhei Torii, MD

Intraaortic Balloon Entrapment 368

Michael D. Horowitz, MD, Monica Otero, BS, Eduardo J. de Marchena, MD, Richard M. Neibart, MD, Stana Novak, RN, and Hooshang Bolooki, MD

Bullet Embolization to a Coronary Artery 370

Henry R. Hopkins, MD, and Dragan P. Pecirep, MD

Management of Giant Coronary Artery Aneurysm With Fistulization Into the Right Atrium 372

George Abou Eid, MD, Loïc Lang-Lazdunski, MD, Ulrik Hvass, MD, Yves Pansard, MD, Nadia Belmatoug, MD, Marc Faraggi, MD, Catherine Paillole, MD, and Jean Langlois, MD

Metastatic Malignant Schwannoma in the Heart 374

Raheel Hussain, FRCSI, and Maurice C. Neligan, FRCSI

Esophageal Schwannoma 376

Hiroshi Iwata, MD, Makoto Kataoka, MD, Yosuke Yamakawa, MD, Yoshiyuki Kuwabara, MD, Yasuyuki Kureyama, MD, and Akira Masaoka, MD

Management of an Innominate Artery Aneurysm During an Open Heart Operation 377

Mark S. Adkins, MD, Wayne E. Gaines, MD, Glenn W. Laub, MD, William A. Anderson, MD, Javier Fernandez, MD, and Lynn B. McGrath, MD

Successful Left Ventricular Assist After a First and Second Heart Operation 379

James A. Magovern, MD, Alfred D. Campellone, MD, and George J. Magovern, MD

How to Do It**Use of Cardioplegia Delivery Equipment for Rapid Warm Volume Replacement After Cardiopulmonary Bypass 381**

Norman J. Manley, CCP, Ralph M. Montesano, CCP, Ronald Horvat, CRNA, and Theodore G. Phillips, MD

Technical Modification for Anastomosis of Low-Lying Coronary Ostia in Bentall Procedure 383

Jean Yves Neveux, MD, Patrice Dervanian, MD, Thierry A. Folliguet, MD, Loïc Macé, MD, and Vladimir Guluta, MD

Saphenous Vein Preparation for Coronary Artery Bypass Grafting Using a Cardioplegia Delivery Set 385

Daniel J. Waters, DO, and Timothy A. Thomsen, MD

Intraoperative Procurement of Autologous Fibrin Glue 387

Robert L. Quigley, MD, DPhil, James A. Perkins, MD, Robert J. Gottner, MD, Ronald D. Curran, MD, Birgitta E. Kuehn, CCP, William J. Hoff, CCP, Michael E. Wallock, CCP, Carl E. Arentzen, MD, and John C. Alexander, Jr, MD

Current Review

Cardiac Hemangiomas 390

Christian Brizard, MD, Christian Latremouille, MD, Victor A. Jebara, MD, Christophe Acar, MD, Jean-Noël Fabiani, MD, Alain Deloche, MD, and Alain F. Carpentier, MD, PhD

Correspondence

Total Anomalous Pulmonary Venous Connection 395

Steven J. Phillips, MD

Preoperative Glucose-Insulin-K⁺ Therapy for Cardiac Protection: What Can Be Recommended? 395

Vajubhai T. Sanchala, MD, and Mario A. Inchiosa, Jr, PhD

How to Prevent Pleural Opening in Harvesting the Internal Mammary Arteries 395

Hisanori Mayumi, MD, and Kanzi Matsui, MD

Reply

Albert D. Pacifico, MD

Reply

Giorgio Noera, MD, PhD

Sense, Antisense, Nonsense, and Missense 397

Tsung O. Cheng, MD

Hypothermic Thoracoabdominal Aneurysm Operation 397

Mahadev D. Dixit, MD, Devi P. Shetty, MD, and K. V. Surendranath, BSc

Release of Vasoactive Substances During Cardiopulmonary Bypass 397

Anthony C. De Souza, FRCS, and Thomas J. Spyt, MD

Device-Supported Myocardial Revascularization 398

Reida M. El Oakley, FRCS

Bronchial Polyp Secondary to Foreign Body 398

John D. Urschel, MD, William J. Dickout, MD, Glen D. Neuman, MD, and John M. Danyluk, MD

Reply

Yoshifumi Naka, MD

- Septal Myocardial Infarction: A Complication of Coronary Artery Stay Sutures** 400
Fred H. Splittgerber, MD, and Carmine Minale, MD

- Adverse Hemodynamic Effects of Pericardial Closure Soon After an Open Heart Operation** 401
Yoshinori Ota, MD

- Simple Way to Improve Right Ventricular Flow Distribution During Continuous Retrograde Cardioplegia** 402
Andrew M. Duda, MD, Scott M. Goldman, MD, and Francis P. Sutter, DO

Review of Recent Books

- The Evolution of Cardiac Surgery, by Harris B. Shumacker, Jr, MD** 389
Anthony R. C. Dobell, MD

Announcements

- Forthcoming Articles** A-22
Information for Authors A-23, 24
Guidelines for the Submission of Electronic Manuscripts A-25
Events of Interest A-26, 27
The Society of Thoracic Surgeons: Thirtieth Annual Meeting 252
Southern Thoracic Surgical Association: Fortieth Annual Meeting 281
Notice From the American Board of Thoracic Surgery 327, 386
Classified Advertisements A-29, 30
Index to Advertisers A-34
-

Number 3 September 1993

Editorials

- St. Jude Medical Prosthesis: Another 10-Year Follow-up Report** 403
Kit V. Arom, MD, PhD
A Perspective of Postoperative Atrial Fibrillation in Cardiac Operations 405
James L. Cox, MD

Thoracic Surgery Directors Association Award

- Gross and Microvascular Distribution of Retrograde Cardioplegia in Explanted Human Hearts** 410
Richard N. Gates, MD, Hillel Laks, MD, Davis C. Drinkwater, MD, Jeffrey M. Pearl, MD, Ana Maria Zaragoza, MD, William Lewis, MD, Thomas J. Sorensen, BS, Elias M. Kaczer, BS, and Paul A. Chang, BS

Original Articles

- Operation for Congestive Heart Failure: Transplantation, Coronary Artery Bypass, and Cardiomyoplasty** 418
 James A. Magovern, MD, George J. Magovern, Sr, MD, Thomas D. Maher, Jr, MD, Daniel H. Benckart, MD, Sang B. Park, MD, Ignacio Y. Christlieb, MD, and George J. Magovern, Jr, MD
- Assessment of Right Ventricular Contractile Performance After Pulmonary Resection** 426
 Carolyn E. Reed, MD, B. Hugh Dorman, MD, PhD, and Francis G. Spinale, PhD
- Comparison of Blood Reinfusion Techniques Used During Coronary Artery Bypass Grafting** 433
 Victor A. Ferraris, MD, PhD, William R. Berry, MD, and Robert R. Klingman, MD
- Operative Approaches for Left-Sided Carinoplasty** 441
 Masazumi Maeda, MD, Kembu Nakamoto, MD, Noriyuki Tsubota, MD, Takahiro Okada, MD, and Hiroshi Katsura, MD
- Paraesophageal Hiatal Hernia: Is an Antireflux Procedure Necessary?** 447
 Warren A. Williamson, MD, F. Henry Ellis, Jr, MD, PhD, John M. Streitz, Jr, MD, and David M. Shahian, MD
- Pulsatile Versus Nonpulsatile Reperfusion Improves Cerebral Blood Flow After Cardiac Arrest** 453
 Mark P. Anstadt, MD, Mark Tedder, MD, Sanjay S. Hegde, BA, R. Anthony Perez-Tamayo, MD, Barbara J. Crain, MD, PhD, Victor Lin Khian Ha, Salah Abdel-Aleem, PhD, William D. White, MPH, and James E. Lowe, MD
- St. Jude Prosthesis for Aortic and Mitral Valve Replacement: A Ten-Year Experience** 462
 John M. Kratz, MD, Fred A. Crawford, Jr, MD, Robert M. Sade, MD, Arthur J. Crumley, MD, and Martha R. Stroud, MS
- Management of Pediatric Postoperative Chylothorax** 469
 Sheldon J. Bond, MD, Philip C. Guzzetta, MD, Matthew L. Snyder, MD, and Judson G. Randolph, MD
- Heparin-Coated Bypass Circuits Reduce Pulmonary Injury** 474
 J. Mark Redmond, MD, A. Marc Gillinov, MD, R. Scott Stuart, MD, Kenton J. Zehr, MD, Jerry A. Winkelstein, MD, Ahvie Herskowitz, MD, Duke E. Cameron, MD, and William A. Baumgartner, MD
- Coronary Bypass With Ejection Fraction of 0.20 or Less Using Centigrade Cardioplegia: Long-Term Follow-up** 480
 Steven L. Lansman, MD, PhD, Marc Cohen, MD, Jan D. Galla, MD, PhD, Josef Machac, MD, Cid S. Quintana, MD, M. Arisan Ergin, MD, PhD, and Randall B. Griepp, MD
- Coronary Artery Bypass in Patients With Severely Depressed Ventricular Function** 487
 Carmelo A. Milano, MD, William D. White, MPH, L. Richard Smith, PhD, Robert H. Jones, MD, James E. Lowe, MD, Peter K. Smith, MD, and Peter Van Trigt III, MD

Protection From Postischemic Spinal Cord Injury by Perfusion Cooling of the Epidural Space	494
Koichi Tabayashi, MD, Koki Niibori, MD, Hidehiko Konno, MD, and Hitoshi Mohri, MD	
Long-Term Appraisal of Coronary Bypass Operations in Familial Hypercholesterolemia	499
Toshiki Takahashi, MD, Susumu Nakano, MD, Yasuhisa Shimazaki, MD, Mitunori Kaneko, MD, Nobuaki Hirata, MD, Tadashi Nakamura, MD, Yuji Matsuzawa, MD, Soichiro Kitamura, MD, and Hikaru Matsuda, MD	
Two-Dimensional Echocardiography in the Evaluation of Penetrating Intrapericardial Injuries	506
Joe W. R. Bolton, MD, Raymond P. Bynoe, MD, Harold L. Lazar, MD, and Carl H. Almond, MD	
Obligatory Glenn Shunt in Fenestrated Fontan	510
Serafin Y. DeLeon, MD, Jenny E. Freeman, MD, E. Phillip Ow, MD, Jose A. Quinones, MD, Timothy J. Bell, MD, Elizabeth A. Fisher, MD, Francis X. Downey, MD, Henry J. Sullivan, MD, and Roque Pifarré, MD	
Absent Diastolic Cerebral Blood Flow Velocity After Circulatory Arrest but Not After Low Flow in Infants	515
Rafael Astudillo, Jan van der Linden, MD, Rolf Ekroth, MD, Örjan Wesslén, MD, Stefan Hallhagen, MD, Michael Scallan, FFARCS, Darryl Shore, FRCS, and Christopher Lincoln, FRCS	
Conformational Adaptation of Muscle: Implications in Cardiomyoplasty and Skeletal Muscle Ventricles	520
Kendra K. Gealow, PhD, Eric E. Solien, BS, Richard W. Bianco, BA, Ray C.-J. Chiu, MD, PhD, and Sara J. Shumway, MD	
Management of Lymphoproliferative Disorders After Cardiac Transplantation	527
Jonathan M. Chen, BS, Mark L. Barr, MD, Amy Chadburn, MD, Glauco Frizzera, MD, Felicia A. Schenkel, RN, Robert R. Sciacca, EngScD, Dennis S. Reison, MD, Linda J. Addonizio, MD, Eric A. Rose, MD, Daniel M. Knowles, MD, and Robert E. Michler, MD	
Hazards of Postoperative Atrial Arrhythmias	539
Lawrence L. Creswell, MD, Richard B. Schuessler, PhD, Michael Rosenbloom, MD, and James L. Cox, MD	
<i>Case Reports</i>	
Congenital Septation of the Aortic Arch With Carotid Stenosis	550
Stephen Westaby, FRCS, Simon W. H. Kendall, FRCSEd, and Ingagerd Ostman-Smith, FRCP	
Extended Donor Use for Heart Transplantation	552
Wickii T. Vigneswaran, MB, Brooks S. Edwards, MD, and Christopher G. A. McGregor, MB	

Interrupted Aortic Arch and Aortopulmonary Window: One-Stage Repair in the First Week of Life 554

Gaetano Gargiulo, MD, Lucio Zannini, MD, Sonia-Bernadette Albanese, MD, Guido Frascaroli, MD, Maria-Cristina Santorelli, MD, Claudia Rossi, MD, Marco Bonvicini, MD, and Angelo Pierangeli, MD

Salmonella Mediastinal Abscess 556

John M. Snider, MD, Hamner Hannah, MD, W. Kendall McNabney, MD, and L. Beaty Pemberton, MD

Fractured Rib With Penetrating Cardiopulmonary Injury 558

Ivor F. Galvin, FRCSI, Robert Costa, MBBS, and Mark Murton, FRACS

Recurrent Primary Liposarcoma of the Pericardium: Management by Repeated Resections 560

Simon W. H. Kendall, FRCSEd, Elizabeth A. Williams, MB, James B. Hunt, MMedPath(UCT), Michael C. Petch, MD, Francis C. Wells, FRCS, and Benjamin B. Milstein, FRCS

Successful Lung Transplantation in a Long-Term Ventilator-Dependent Patient 562

Adelheid End, MD, Michael Grimm, MD, Peter Mares, MD, Derya Oturanlar, MD, Sylvia Hartl, MD, Werner Heindl, MD, Ernst Wolner, MD, and Walter Klepetko, MD

Primary Left Atrial Myxosarcoma 564

Gary J. Harris, MD, Fermin O. Tio, MD, and Frederick L. Grover, MD

Use of Heparin-Coated Cardiopulmonary Bypass 566

David R. Jones, MD, Ronald C. Hill, MD, Michael J. Hollingsed, CCP, Edward Stullken, MD, Geoffrey M. Graeber, MD, Robert A. Gustafson, MD, and Gordon F. Murray, MD

Neonatal Spinal Cord Syndrome Associated With Hypoplastic Aortic Arch and Anemia 568

Moshe Amitay, MD, Robert W. Welch, MRCP, Paul J. Byrne, FRCPC, Murray A. Robertson, FRCPC, and Patricia A. Penkoske, FRCSC

Repair of Double Aortic Arch Associated With D-Transposition of the Great Arteries 570

John P. Kupferschmid, MD, Stephanie A. Burns, MD, Richard A. Jonas, MD, John F. Keane, MD, Phillip J. Spevak, MD, and Gil Wernovsky, MD

How to Do It

Endoscopic Stapling Technique of Esophagodiverticulostomy for Zenker's Diverticulum 573

Jean-Marie Collard, MD, Jean-Bernard Otte, MD, and Paul Jacques Kestens, MD

Two-Suture Technique for Pulmonary Artery Anastomosis in Orthotopic Heart Transplantation 577

Frank A. Baciewicz, Jr, MD

Simplified Technique for Left Heart Bypass to Repair Aortic Transection 579

David A. Fullerton, MD

Anatomic Considerations in Closed Transatrial Cannulation of the Coronary Sinus 581

Amram J. Cohen, MD, Eli Hauptman, MD, Ezra Shaul, MD, and Ari Schachner, MD

Our Surgical Heritage

Theodore Tuffier's Attempt at Cardiac Resuscitation 583

Anthony R. C. Dobell, MD

Collective Review

Catheter-Induced Pulmonary Artery Rupture in the Setting of Cardiopulmonary Bypass 585

John D. Urschel, MD, and P. David Myerowitz, MD

Key References

Key References 590

Report

Guidelines for Courses From the AATS/STS Joint Committee on Video Assisted Thoracic Surgery 591

Correspondence

Treatment of Postthoracotomy Supraventricular Tachyarrhythmias 593

Tsung O. Cheng, MD

Reply

Andrew J. Ritchie, FRCSEd

Dialdehyde Starch-Tanned Bovine Grafts in the Coronary Position 593

Yasuko Tomizawa, MD, PhD, Marc R. Moon, MD, and Yasuharu Noishiki, MD, PhD

Reply

Ian M. Mitchell, FRCS, Paul G. Martin, BSc, Nigel R. Saunders, FRCS, and R. Unnikrishnan Nair, FRCS

Pericardial Fluid and Hemolysis 595

Harry Siderys, MD

Thoracic Esophageal Perforations 595

John P. Clarke, MD

Reply

Sunil K. Ohri, FRCS

Continuous Intercostal Bupivacaine 596

Jonathan Richardson, FCAnaes, and Sabaratnam Sabanathan, FRCS

Neonatal Pneumonectomy 596

David C. Cleveland, MD

Economic Credentialing 597

Raj B. Lal, MD

THORACOSCOPIC SURGERY SYMPOSIUM

The First International Symposium on Thoracoscopic Surgery 603

Scientific Program 605

Session I: Introduction and General Techniques

Introduction 609

Michael J. Mack, MD

The History of Thoracoscopic Surgery 610

Mark V. Braimbridge, FRCS

Strategic Planning for Video-Assisted Thoracic Surgery 615

Rodney J. Landreneau, MD, Michael J. Mack, MD, Robert J. Keenan, MD,
Steven R. Hazelrigg, MD, Robert D. Dowling, MD, and Peter F. Ferson, MD

Equipment for Thoracoscopy 620

Mark S. Allen, MD, Victor F. Trastek, MD, Richard C. Daly, MD, Claude Deschamps, MD,
and Peter C. Pairolero, MD

Anesthetic Techniques for Thoracoscopy 624

Jeffrey L. Horswell, MD

Pain Management Principles and Anesthesia Techniques for Thoracoscopy 630

David S. Mulder, MD

Cost Analysis for Thoracoscopy: Thoracoscopic Wedge Resection 633

Stephen R. Hazelrigg, MD, Susan K. Nunchuck, PhD, Rodney J. Landreneau, MD,
Michael J. Mack, MD, Keith S. Naunheim, MD, Paul E. Seifert, MD, and
James E. Auer, MD

Session I: Panel Discussion 636

Moderator: Martin F. McKneally, MD, PhD

Panelists: Mark J. Krasna, MD, and David J. Sugarbaker, MD

Session II: Pleural Disease

Diagnostic Thoracoscopy for Pleural Disease 639

Thomas M. Daniel, MD

Thoracoscopic Management of Malignant Pleural Effusion	641
Joseph LoCicero III, MD	
Thoracoscopy for Empyema, Bronchopleural Fistula, and Chylothorax	644
Mark K. Ferguson, MD	
The Role of Thoracoscopy in Thoracic Trauma	646
Geoffrey M. Graeber, MD, and David R. Jones, MD	
The Role of Thoracoscopy in the AIDS/Immunocompromised Patient	649
Richard H. Feins, MD	
Session II: Panel Discussion	651
Moderator: Joseph I. Miller, Jr, MD	
Panelists: Tea E. Acuff, MD, Walter B. Cannon, MD, Rodney J. Landreneau, MD, and Keith S. Naunheim, MD	
 <i>Session III: Mediastinal Disease</i>	
Thoracoscopy in the Management of Anterior Mediastinal Masses	653
David J. Sugarbaker, MD	
Video Thoracoscopy for Masses of the Posterior Mediastinum	657
Keith S. Naunheim, MD	
Thoracoscopic Resection of Mediastinal Cysts	659
Stephen R. Hazelrigg, MD, Rodney J. Landreneau, MD, Michael J. Mack, MD, and Tea E. Acuff, MD	
Thoracoscopy for Staging of Lung Cancer	661
Tsuguo Naruke, MD, Hisao Asamura, MD, Haruhiko Kondo, MD, Ryosuke Tsuchiya, MD, and Keiichi Suemasu, MD	
Session III: Panel Discussion	664
Moderator: Mark J. Krasna, MD	
Panelists: Joel D. Cooper, MD, Rodney J. Landreneau, MD, and Hani Shennib, MD	
 <i>Session IV: Esophageal Disease</i>	
Thoracoscopic Esophagectomy: Technique and Initial Results	667
Dominique Gossot, MD, Pierre Fourquier, MD, and Michel Celerier, MD	
Thoracoscopic Lymph Node Staging for Esophageal Cancer	671
Mark J. Krasna, MD, and Joseph S. McLaughlin, MD	
En Bloc and Standard Esophagectomies by Thoracoscopy	675
Jean-Marie Collard, MD, Benoît Lengele, MD, Jean-Bernard Otte, MD, and Paul-Jacques Kestens, MD	

Thoracoscopic Esophageal Myotomy in the Treatment of Achalasia 680

Carlos A. Pellegrini, MD, Rhoda Leichter, MD, Marco Patti, MD, Kenneth Somberg, MD,
James W. Ostroff, MD, and Lawrence Way, MD

Session IV: Panel Discussion 683

Moderator: Mark K. Ferguson, MD

Panelists: Richard H. Feins, MD, Toni E. Lerut, MD, and Joseph I. Miller, Jr, MD

Session V: Blebs, Bullae, and Interstitial Lung Disease

Thoracoscopy for Spontaneous Pneumothorax 686

Walter B. Cannon, MD, Mark A. Vierra, MD, and Annatina Cannon, BA

Thoracoscopic Treatment of Spontaneous Pneumothorax 688

Yoshihito Takeno, MD

Thoracoscopic Stapled Bullectomy Supported by Suturing 691

Akira Yamaguchi, MD, Mayumi Shinonaga, MD, Shoh Tatebe, MD, Takahiro Souma, MD,
Masanori Tsuchida, MD, and Akira Saito, MD

Thoracoscopy for Diagnosis of Diffuse Lung Disease 694

Mark K. Ferguson, MD

Perspectives on Thoracoscopy in General Thoracic Surgery 697

Joel D. Cooper, MD

Session V: Panel Discussion 701

Moderator: Thomas M. Daniel, MD

Panelists: Geoffrey M. Graeber, MD, Stephen R. Hazelrigg, MD, and Larry R. Kaiser, MD

Session VI: Pediatrics and Bullous Emphysema

Pediatric Thoracoscopy: Where Have We Come and What Have We Learned? 704

Bradley M. Rodgers, MD

Thoracoscopic Technique for Management of Giant Bullous Lung Disease 708

Akio Wakabayashi, MD

Session VI: Panel Discussion 713

Moderator: Tea E. Acuff, MD

Session VII: Miscellaneous Aspects of Thoracoscopy

Thoracoscopy for Autonomic Disorders 715

Göran Claes, MD, PhD, Christer Drott, MD, PhD, and Gunnar Göthberg, MD, PhD

Dorsal Sympathectomy and Management of Thoracic Outlet Syndrome With VATS 717

Harold C. Urschel, Jr, MD

Thoracoscopic Surgery: The Belgian Experience	721
Willy Coosemans, MD, Toni E. Lerut, PhD, and Dirk E. M. Van Raemdonck, MD	
Thoracoscopy in Europe: Views From North America	731
David S. Mulder, MD	
Video-Assisted Thoracic Surgery Study Group	734
Joseph LoCicero III, MD	
Application of Thoracoscopy for Diseases of the Spine	736
Michael J. Mack, MD, John J. Regan, MD, Walter P. Bobechko, MD, and Tea E. Acuff, MD	
Implantable Cardioverter Defibrillator: The Role of Thoracoscopy	739
Michael J. Mack, MD, Tea E. Acuff, MD, and William H. Ryan, MD	
Session VII: Panel Discussion	741
Moderator: Keith S. Naunheim, MD	
Panelists: Tea E. Acuff, MD, Thomas M. Daniel, MD, and Rodney J. Landreneau, MD	
<i>Session VIII: Lung Cancer—Diagnosis and Localized Resection</i>	
Management of the Indeterminate Solitary Pulmonary Nodule: A Pulmonologist's View	743
Allan N. Shulkin, MD	
Intraoperative Localization Techniques for Pulmonary Nodules	745
Hani Shennib, MD	
Role of Mechanical Stapling Devices in Thoracoscopic Pulmonary Resection	749
Tea E. Acuff, MD, Michael J. Mack, MD, Rodney J. Landreneau, MD, and Stephen R. Hazelrigg, MD	
Alternative (Muscle-Sparing) Incisions in Thoracic Surgery	752
Robert J. Ginsberg, MD	
Session VIII: Panel Discussion	755
Moderator: Rodney J. Landreneau, MD	
Panelists: Joseph LoCicero III, MD, Joseph I. Miller, Jr, MD, and Harold C. Urschel, Jr, MD	
<i>Session IX: Resective Therapy for Lung Cancer</i>	
VATS Wedge Resection of the Lung Using the Neodymium:Yttrium-Aluminum Garnet Laser	758
Rodney J. Landreneau, MD, Robert J. Keenan, MD, Stephen R. Hazelrigg, MD, Robert D. Dowling, MD, Michael J. Mack, MD, and Peter F. Ferson, MD	
The Role of Video-Assisted Thoracic Surgery for Carcinoma of the Lung: Wedge Resection to Lobectomy by Simultaneous Individual Stapling	762
Ralph J. Lewis, MD	

Limited Resection of Bronchogenic Carcinoma in the Patient With Impaired Pulmonary Function 769

Joseph I. Miller, Jr, MD

Video-Assisted Thoracoscopic Resection of Pulmonary Metastases 772

Robert D. Dowling, MD, Robert J. Keenan, MD, Peter F. Ferson, MD, and Rodney J. Landreneau, MD

Video-Assisted Thoracoscopy and the Staging of Lung Cancer 776

John C. Wain, MD

Major Pulmonary Resections: Pneumonectomies and Lobectomies 779

Giancarlo Roviato, MD, Federico Varoli, MD, Carlo Rebuffat, MD, Contardo Vergani, MD, André D'Hoore, MD, Silvio Marco Scalambra, MD, Marco Maciocco, MD, and Fabrizio Grignani, MD

Thoracoscopic Lobectomy 784

Thomas J. Kirby, MD, and Thomas W. Rice, MD

Session IX: Panel Discussion 787

Moderator: Stephen R. Hazelrigg, MD

Panelists: David S. Mulder, MD, Keith S. Naunheim, MD, and David J. Sugarbaker, MD

Session X: Other Aspects of VATS

Thoracoscopic Pericardiectomy for Effusive Pericardial Disease 792

Stephen R. Hazelrigg, MD, Michael J. Mack, MD, Rodney J. Landreneau, MD, Tea E. Acuff, MD, Paul E. Seifert, MD, and James E. Auer, MD

Complications of Thoracoscopy 796

Larry R. Kaiser, MD, and Joseph E. Bavaria, MD

Thoracoscopy Training in a Residency Program 799

John C. Wain, MD

Thoracoscopy: A Cautionary Note 801

Robert J. Ginsberg, MD

The Present Role and Future Considerations of Video-Assisted Thoracoscopy in General Thoracic Surgery 804

Joseph I. Miller, Jr, MD

Review of Recent Books

Organ Transplantation—Long-Term Results, edited by Leendert C. Paul and Kim Solez 580

Glenn Halff, MD

Announcements

Forthcoming Articles	A-38
Events of Interest	A-40, 41
Information for Authors	A-43, 44
Guidelines for the Submission of Electronic Manuscripts	A-45
The Society of Thoracic Surgeons: Thirtieth Annual Meeting	432
Southern Thoracic Surgical Association: Fortieth Annual Meeting	498, 598
Notice From the American Board of Thoracic Surgery	509, 592
Program for the Fortieth Annual Meeting of the Southern Thoracic Surgical Association	599
Classified Advertisements	A-47, 48
Index to Advertisers	A-52

Number 4 October 1993

Editorials

Airway Revascularization: Is It Necessary?	807
G. Alexander Patterson, MD	
Are Arterial Grafts Better or Worse Than Applied Physiology Teaches?	809
Thomas A. Orszulak, MD	
Hypoperfusion After Arterial Bypass Grafting	812
Floyd D. Loop, MD, and James D. Thomas, MD	

Original Articles

Five-Year Experience With the Maze Procedure for Atrial Fibrillation	814
James L. Cox, MD, John P. Boineau, MD, Richard B. Schuessler, PhD, Kathryn M. Kater, MSN, and Demetrios G. Lappas, MD	
Thoracoscopy for the Diagnosis of the Indeterminate Solitary Pulmonary Nodule	825
Michael J. Mack, MD, Stephen R. Hazelrigg, MD, Rodney J. Landreneau, MD, and Tea E. Acuff, MD	
Mid-Term Results After Bidirectional Cavopulmonary Shunts	833
John A. Hawkins, MD, Robert E. Shaddy, MD, Ronald W. Day, MD, Jane E. Sturtevant, BSN, Garth S. Orsmond, MD, and Edwin C. McGough, MD	
Transhiatal Esophagectomy for Carcinoma of the Esophagus	838
Wickii T. Vigneswaran, MD, Victor F. Trastek, MD, Peter C. Pairolero, MD, Claude Deschamps, MD, Richard C. Daly, MD, and Mark S. Allen, MD	

- Neutrophil Adhesion Molecule Expression During Cardiopulmonary Bypass With Bubble and Membrane Oxygenators** 847
A. Marc Gillinov, MD, Jenny M. Bator, PhD, Kenton J. Zehr, MD, J. Mark Redmond, MD, Ronald M. Burch, MD, PhD, Chiew Ko, Jerry A. Winkelstein, MD, R. Scott Stuart, MD, William A. Baumgartner, MD, and Duke E. Cameron, MD
- Staged Conversion to Arterial Switch for Late Failure of the Systemic Right Ventricle** 854
Andrew D. Cochrane, FRACS, Tom R. Karl, MD, and Roger B. B. Mee, FRACS
- Accuracy of Lung Imaging in Metastases With Implications for the Role of Thoracoscopy** 863
Patricia M. McCormack, MD, Karyn B. Ginsberg, BA, Manjit S. Bains, MD, Michael E. Burt, MD, PhD, Nael Martini, MD, Valerie W. Rusch, MD, and Robert J. Ginsberg, MD
- Girdling Effect of Nonstimulated Cardiomyoplasty on Left Ventricular Function** 867
Eli R. Capouya, MD, Richard S. Gerber, MD, Davis C. Drinkwater, Jr, MD, Jeffrey M. Pearl, MD, Jeffrey B. Sack, MD, Alon S. Aharon, MD, Steven W. Barthel, BS, Elias M. Kaczer, BS, Paul A. Chang, BS, and Hillel Laks, MD
- Bilateral Mammary Artery Grafting: Avoidance of Complications With Extended Use** 872
Kevin D. Accola, MD, Ellis L. Jones, MD, Joseph M. Craver, MD, William S. Weintraub, MD, and Robert A. Guyton, MD
- Esophagectomy in the Septuagenarian** 880
Keith S. Naunheim, MD, James Hanosh, MD, Joseph Zwischenberger, MD, Mark W. Turrentine, MD, Kenneth A. Kesler, MD, Laurie B. Reeder, MD, Mark K. Ferguson, MD, and Arthur E. Baue, MD
- Successful Double-Lung Transplantation With Direct Bronchial Artery Revascularization** 885
Richard C. Daly, MD, Samad Tadjkarimi, MD, Asghar Khaghani, FRCS, Nicholas R. Banner, MRCP, and Magdi H. Yacoub, FRCS
- Intraoperative Predonation Contributes to Blood Saving** 893
Jacques P. A. M. Schönberger, MD, Johan J. Bredée, MD, PhD, Dave Tjian, MD, Peter A. M. Everts, EKP, and Charles R. H. Wildevuur, MD, PhD
- Different Anticoagulants and Platelet Reactivity in Cardiac Surgical Patients** 899
Lindsay C. H. John, FRCS, Gareth M. Rees, FRCS, and Iren B. Kovacs, FRCPath
- Thoracoplasty in the Context of Current Surgical Practice** 903
George Peppas, MD, Thomas F. Molnar, MD, Kumarasingham Jeyasingham, FRCS, and Alan B. Kirk, FRCS
- Biophysical Properties of the Gelatin-Resorcin-Formaldehyde/Glutaraldehyde Adhesive** 910
Johannes M. Albes, MD, Christian Krettek, MD, Bernard Hausen, MD, Roland Rohde, MD, Axel Haverich, MD, and Hans-Georg Borst, MD
- Antibiotic Prophylaxis in Cardiac Operations** 916
John C. Hall, FRACS, Keryn Christiansen, FRCPA, Martin J. Carter, FRACS, Mark G. Edwards, FRACS, Andrew J. Hodge, FRACS, Mark A. Newman, FRACS, Trevor T. Nicholls, FRACS, and Jane Hall, RN

Closure of Bronchial Defects Using a Pedicled Pericardial Flap	923
Freyja-Maria Smolle-Jüettner, MD, Hans Pinter, MD, Gabriele Pongratz, MD, Beatrice Ratzenhofer, MD, Helmut Popper, MD, and Gerhard Friehs, MD	
Transluminal Angioplasty of the Subclavian Artery in Patients With Internal Mammary Grafts	927
Louis P. Perrault, MD, Michel Carrier, MD, Gilles Hudon, MD, Lise Lemarbre, MD, Yves Hébert, MD, and L. Conrad Pelletier, MD	
Mitral Valve Carpentier-Edwards Bioprosthetic Replacement, Thromboembolism, and Anticoagulants	931
Yves A. Louagie, MD, Jacques Jamart, MD, Philippe Eucher, MD, Michel Buche, MD, and Jean-Claude Schoevaerds, MD	
Comparison of Three Blood-Processing Techniques During and After Cardiopulmonary Bypass	938
Robin G. Sutton, MS, John M. Kratz, MD, Francis G. Spinale, PhD, and Fred A. Crawford, Jr, MD	
Survival Analysis of Infants Under Age 18 Months Presenting With Tetralogy of Fallot	944
Suzanne J. Vobecky, MD, William G. Williams, MD, George A. Trusler, MD, John G. Coles, MD, Ivan M. Rebeyka, MD, Jeffrey Smallhorn, MD, Patricia Burrows, MD, Robert Gow, MD, and Robert M. Freedom, MD	
Physiologic Characteristics of Coronary Artery Bypass Grafts	951
Takeo Tedoriya, MD, Michio Kawasaki, MD, Keishi Ueyama, MD, Naoki Sakakibara, MD, Hirofumi Takemura, MD, and Yoh Watanabe, MD	
Flow Capacities of Arterial Grafts for Coronary Artery Bypass Grafting	957
Michio Kawasaki, MD, Takeo Tedoriya, MD, Hirofumi Takemura, MD, Naoki Sakakibara, MD, Junichi Taki, MD, and Yoh Watanabe, MD	
Case Reports	
Total Cavopulmonary Direct Anastomosis: A Logical Approach in Selected Patients	963
Adriano Carotti, MD, Fiore S. Iorio, MD, Antonio Amodeo, MD, Alessandro Giamberti, MD, Stefano Marianeschi, MD, Simonetta Nava, MD, Giuseppe De Simone, MD, Duccio C. di Carlo, MD, and Carlo Marcelletti, MD	
Primary B-Cell Malignant Lymphoma of the Lung	964
Charles C. Canver, MD	
Traumatic Pseudoaneurysm of Left Internal Mammary Artery Graft	966
E. Andreas Agathos, MD, Ali Hussein, MD, Hemant Trehan, MD, Stuart E. Trenholme, MD, and H. Storm Floten, MD	
Dacron Aorta	968
Hassan Najafi, MD	

Perforation of the Esophagus by a Fish Bone Leading to Cardiac Tamponade 969

Matthew G. Sharland, MB, BS, and Brian C. McCaughan, FRACS

Cardiac Dilatation After Cardiopulmonary Bypass: Ceramic Plate Technique for Sternal Splinting 971

Hitoshi Yokoyama, MD, PhD, Takao Togo, MD, Sadayuki Murata, MD, Kenji Osaka, MD, Makoto Miura, MD, Koichi Tabayashi, MD, and Hitoshi Mohri, MD

Sequential Bilateral Lung Transplantation for Pulmonary Alveolar Microlithiasis 972

George Stamatis, MD, Hans-Reinhard Zerkowski, MD, Norbert Doetsch, MD, Dieter Greschuchna, MD, Nikolaus Konietzko, MD, and Jürgen Christoph Reidemeister, MD

Right Gastroepiploic Artery Used as a Pedicled Graft in a Retrograde Fashion 975

Gebrine Khoury, MD, Mohamed Amrani, MD, Robert Verhelst, MD, Pierre Goffette, MD, Ary Baldovinos, MD, and Robert A. Dion, MD

Chronic Type A Aortic Dissection: An Unusual Complication of Cocaine Inhalation 977

Mark S. Adkins, MD, Wayne E. Gaines, MD, William A. Anderson, MD, Glenn W. Laub, MD, Javier Fernandez, MD, and Lynn B. McGrath, MD

Staged Repair of Pentalogy of Cantrell With Tetralogy of Fallot 979

Hasan I. Abdallah, MD, Lloyd A. Marks, MD, Rohinton K. Balsara, MD, Deborah A. Davis, MD, and Pierantonio A. Russo, MD

How to Do It

Retrograde Vital Organ Perfusion During Aortic Arch Repair 981

George Matalanis, FRACS, and Brian F. Buxton, FRACS

Prevention of Retrograde Cardioplegia Catheter Displacement 985

Francis P. Sutter, DO, and Scott M. Goldman, MD

Aorto-Aortic Shunt via the Left Ventricular Apex for Operation on the Distal Arch and the Descending Aorta 986

Mazin A. I. Sarsam, FRCS, and Abdul K. Deiraniya, FRCS

Our Surgical Heritage

Hugh Morriston Davies: First Dissection Lobectomy in 1912 988

Andreas P. Naef, MD

Current Review

Lung Preservation: A Review of Current Practice and Future Directions 990

Alan J. B. Kirk, FRCS, Ian W. Colquhoun, FRCS, and John H. Dark, FRCS

Correspondence

Myocardial Revascularization and Porcelain Aorta 1001

Georges A. Popoff, MD

Reply

Ellis L. Jones, MD

Enzyme Levels in Shed Blood After Cardiac Operations 1001Ruggero De Paulis, MD, Carlo Bassano, MD, Alessandro Ricci, MD,
Guglielmo M. Actis Dato, MD, and Luigi Chiariello, MD**Congenital Aortic Stenosis and Patent Ductus Arteriosus in the Adult** 1003Arun K. Bhutani, MCh, Kesava Dev, MCh, Moosekunhi M. Koppala, MCh,
Madan M. Maddali, MD, Kurudamannil A. Abraham, DM,
Komarakshi R. Balakrishnan, MCh, and Rajesh N. Desai, MCh*Reply*

Donald D. Glower, MD, Thomas M. Bashore, MD, and Charles E. Spritzer, MD

Need for Aprotinin Use Notification 1003

Luca Sandrelli, MD, and Ottavio Alfieri, MD

Reply

Lawrence Tim Goodnough, MD

Primary Closure of Infected Sternum 1005Poo Sing Wong, FRCS, Aprim Youhana, FRCS, Patrick G. Magee, FRCS, and
Robin K. Walesby, FRCS*Reply*

J. Ernesto Molina, MD, PhD

Retrograde Coronary Sinus Cardioplegia 1006

Zile Singh Meharwal, MCh, and Naresh Trehan, MD

Use of an Arch Balloon in Cardiac Surgery Patients With Severe Peripheral Vascular Disease 1006

Saed F. Saedi, MD

Announcements

Forthcoming Articles A-22**Information for Authors** A-23, 24**Events of Interest** A-26, 27**The Society of Thoracic Surgeons: Thirtieth Annual Meeting** 871**Notice From the American Board of Thoracic Surgery** 884

Southern Thoracic Surgical Association: Fortieth Annual Meeting	937
Classified Advertisements	A-29, 30
Index to Advertisers	A-32

Number 5 November 1993

Editorials

Warm Versus Cold Blood Cardioplegia: A Self-Imposed and Counterproductive Dilemma	1007
Gerald D. Buckberg, MD	
Why Not Close a Small Ventricular Septal Defect?	1011
J. Deane Waldman, MD	
A Reason to Close Ventricular Septal Defect?	1013
James R. Malm, MD	

Original Articles

Restrictive Ventricular Septal Defect: How Small Is Too Small to Close?	1014
Carl L. Backer, MD, Richard C. Winters, Vincent R. Zales, MD, Hiroshi Takami, MD, Alexander J. Muster, MD, D. Woodrow Benson, Jr, MD, PhD, and Constantine Mavroudis, MD	
Which Techniques of Cardioplegia Prevent Ischemia?	1020
Terrence M. Yau, MD, John S. Ikonomidis, MD, Richard D. Weisel, MD, Donald A. G. Mickle, MD, Nobuhiko Hayashida, MD, Joan Ivanov, RN, Susan Carson, AHT, Molly K. Mohabeer, BSc, and Laura C. Tumati, BSc	
Simultaneous Tracheal and Esophageal pH Monitoring: Investigating Reflux-Associated Asthma	1029
Raymund J. Donnelly, FRCSE, Richard G. Berrisford, FRCS, Catherine I. A. Jack, MRCP, Jane A. Tran, BTech, and Christopher C. Evans, FRCP	
Effect of Sodium Nitroprusside on Paraplegia During Cross-Clamping of the Thoracic Aorta	1035
Aurel C. Cernaianu, MD, Andreas Olah, MD, Jonathan H. Cilley, Jr, MD, Teimuraz Gaprindashvili, MD, PhD, John G. Gallucci, MD, and Anthony J. DelRossi, MD	
Video Assisted Thoracic Surgery Study Group Data	1039
Stephen R. Hazelrigg, MD, Susan K. Nunchuck, PhD, Joseph LoCicero III, MD, and The Video Assisted Thoracic Surgery Study Group	
Chronic Stimulation Enhances Extramyocardial Collateral Blood Flow After a Cardiomyoplasty	1045
William F. Bailey, Jr, MD, Michael G. Magno, PhD, Peter D. Buckman, MD, Fred DiMeo, BS, Thomas Langan, BM, AAS, Vincent T. Armenti, MD, PhD, and John D. Mannion, MD	

- Surgical Relief of Acute Airway Obstruction due to Primary Tuberculosis** 1054
Michael G. Worthington, FCS(SA), Johan G. Brink, FCS(SA), John A. Odell, FRCS(Ed), Julian Buckels, FRCS(E), Mark K. de Groot, FRCS(C), Max Klein, FCP(SA), and Alfred J. Gunning, FRCS(E)
- A Fifteen-Year Wound Surveillance Study After Coronary Artery Bypass** 1063
Mark S. Slaughter, MD, Mary M. Olson, RN, BSN, James T. Lee, Jr, MD, PhD, and Herbert B. Ward, MD, PhD
- Inhibition of Neutrophil Adhesion Reduces Myocardial Infarct Size** 1069
William E. Curtis, MD, A. Marc Gillinov, MD, Ian C. Wilson, MD, Jenny M. Bator, PhD, Ronald M. Burch, MD, PhD, Duke E. Cameron, MD, and Timothy J. Gardner, MD
- Noninvasive Detection of Acute Rejection in a New Experimental Model of Heart Transplantation** 1074
Steven J. Hoff, MD, James R. Stewart, MD, William H. Frist, MD, James B. Atkinson, MD, PhD, Marvin W. Kronenberg, MD, John Votaw, PhD, Robert M. Kessler, MD, and Martin P. Sandler, MD
- Intercostal Artery: Histomorphometric Study to Assess its Suitability as a Coronary Bypass Graft** 1078
Jacques A. M. van Son, MD, PhD, Frank Smedts, MD, PhD, Jeroen Korving, CT, André Guyt, CT, and Leo B. de Kok, MS
- Clinical Experience With the Right Gastroepiploic Artery in Coronary Artery Bypass Grafting** 1082
Louis P. Perrault, MD, Michel Carrier, MD, Yves Hébert, MD, Gilles Hudon, MD, Raymond Cartier, MD, Yves Leclerc, MD, and L. Conrad Pelletier, MD
- Different Vascular Reactivity of Human Internal Mammary and Inferior Epigastric Arteries In Vitro** 1085
Andreas Mügge, MD, Matthias R. Barton, BSc, Jochen Cremer, MD, Reinhold Frombach, MD, and Paul R. Lichtlen, MD
- Vasoconstrictor Profile of the Inferior Epigastric Artery** 1090
Samad Tadjkarimi, MD, Gregory S. O'Neil, PhD, Catherine J. Schyns, Julie AA. Borland, BN, Adrian H. Chester, PhD, and Magdi H. Yacoub, FRCS
- Mediastinal Paraganglioma: A Surgical Experience** 1096
Miguel F. Herrera, MD, Jon A. van Heerden, MB, Francisco J. Puga, MD, Michael J. Hogan, MD, and J. Aidan Carney, MD
- Predictors of Early Saphenous Vein Aortocoronary Bypass Graft Occlusion** 1101
Marco A. Paz, MD, José Lupon, MD, Xavier Bosch, MD, José L. Pomar, MD, Ginés Sanz, MD, and the GESIC Study Group
- Effect of Internal Mammary Harvest on Postoperative Pain and Pulmonary Function** 1107
Amram J. Cohen, MD, Paul Moore, MD, Carolyn Jones, BA, Thomas J. Miner, MD, Wallace R. Carter, MD, Robert P. Zurcher, MD, Ray Lupkas, MD, and Fred H. Edwards, MD

Simultaneous Total Aortic Replacement From Valve to Bifurcation: Experience With 21 Cases 1110

Carlo G. Massimo, MD, Luigi F. Presenti, MD, Piero P. Favi, MD, Clemente Crisci, MD, and Eduardo A. Cruz Guadrón, MD

Degradation of a Supporting Prosthesis Can Optimize Arterialization of Autologous Veins 1117

Hans-Peter Zweep, MD, Shinichi Satoh, MD, PhD, Berend van der Lei, MD, PhD, Wouter L. J. Hinrichs, PhD, Jan Feijen, PhD, and Charles R. H. Wildevuur, MD, PhD

Respiratory Dysfunction After Uncomplicated Cardiopulmonary Bypass 1123

David P. Taggart, MD(Hons), Mohammed El-Fiky, MB, Rodger Carter, MSc, Adrian Bowman, PhD, and David J. Wheatley, FRCS

Lung Preservation With Low-Potassium Dextran Flush in a Primate Bilateral Transplant Model 1129

Sudhir Sundaresan, MD, Oriane Lima, MD, Hiroshi Date, MD, Akihide Matsumura, MD, Hiroharu Tsuji, MD, Hidefumi Obo, MD, Motoi Aoe, MD, Takatoshi Mizuta, MD, and Joel D. Cooper, MD

Sequential Internal Mammary Artery Grafts for Coronary Artery Bypass 1136

George M. Palatianos, MD, Hooshang Bolooki, MD, Michael D. Horowitz, MD, Maureen H. Lowery, MD, Stephen P. Rosenthal, MD, S. K. C. Chandarlapaty, MD, George N. Sfakianakis, MD, and Gerard A. Kaiser, MD

Clinical and Hemodynamic Performance of the 19-mm Carpentier-Edwards Porcine Bioprosthesis 1141

Robert M. Bojar, MD, Hassan Rastegar, MD, Douglas D. Payne, MD, Charles A. Mack, MD, and Steven L. Schwartz, MD

Limitation of Vasodilation Associated With Warm Heart Operation by a "Mini-Cardioplegia" Delivery Technique 1148

Philippe Menasché, MD, PhD, Jean-Pierre Fleury, MD, Line Veyssié, MD, Olivier Le Dref, MD, Bernard Touchot, MD, Armand H. Piwnica, MD, and Gérard Bloch, MD

Postischemic Deterioration of Sarcoplasmic Reticulum: Warm Versus Cold Blood Cardioplegia 1154

Xuekun Liu, MD, Richard M. Engelman, MD, Zongjie Wei, MD, Nilanjana Maulik, PhD, John A. Rousou, MD, Joseph E. Flack III, MD, David W. Deaton, MD, and Dipak K. Das, PhD

Case Reports

Surgical Resection of a Second Primary Lung Carcinoma in a Survivor of Small Cell Carcinoma 1160

Hiroshi Inoue, MD, Masayuki Iwasaki, MD, Jun-ichi Ogawa, MD, Akira Shohtsu, MD, Sumie Shioya, MD, and Yoshiyuki Osamura, MD

- Infective Aortic Endocarditis After Percutaneous Balloon Aortic Valvuloplasty** 1161
Soon Park, MD, Alvaro Montoya, MD, Niberto Moreno, MD, John F. Moran, MD, William Jacobs, MD, and Roque Pifarre, MD
- Reconstructing an Anomalous Left Coronary Artery Origin Using the Internal Iliac Artery** 1163
Jan Pirk, MD, Juraj Fabián, MD, and Josef Kováč, MD
- Leiomyoma of the Bronchus Treated by Endoscopic Resection** 1164
Kwang Ho Kim, MD, Jeong Soo Suh, MD, and Woon Sup Han, MD
- Transposition of the Great Arteries: Correction With Conversion From Single to Dual Coronary Artery System** 1166
Manuel J. Antunes, MD, PhD, and Antonio S. Melo, MD
- Anomalous Origin of the Left Coronary Artery From the Pulmonary Artery** 1168
Katrien Francois, MD, Frank Provenier, MD, Luc Jordaens, MD, and Guido J. Van Nooten, MD
- Stentless Xenograft Valve in a Truncus Arteriosus Communis** 1171
Georg Kleikamp, MD, Thomas Breymann, MD, Wolf-Rüdiger Thies, MD, Friedrich Gölnitz, MD, Winfried Dramburg, Wolfgang Matthies, MD, Hans Meyer, MD, and Reiner Körfer, MD
- Surgical Repair of Atrial Septal Rupture Due to Blunt Trauma** 1172
Bart P. Jenson, MD, Irwin Hoffman, MD, Fabrizio M. Follis, MD, Larry C. Kuo, MD, and Jorge A. Wernly, MD
- Heart Transplantation for Tumor** 1174
Thomas X. Aufiero, MD, Walter E. Pae, Jr, MD, Barry S. Clemson, MD, David G. Pawlusch, MD, and Dwight Davis, MD
- Clinical Cardiopulmonary Bypass Without Systemic Anticoagulation** 1176
Robert D. Dowling, MD, Michael E. Brown, CCP, Robert O. Whittington, Jr, CCP, Joseph J. Quinlan, MD, and John M. Armitage, MD
- Pedunculated Pulmonary Leiomyoma With Large Cyst Formation** 1178
Giuseppe Gotti, MD, Mohamud Mohamed Haid, MD, Piero Paladini, MD, Maurizio Di Bisceglie, MD, Luca Volterrani, MD, and Vincenzo Sforza, MD
- Atrial Myxomas in Young Children: An Alternative Surgical Approach** 1180
Patrick L. Ergina, MD, Gary S. Kochamba, MD, Christo I. Tchervenkov, MD, and James E. Gibbons, MD

How to Do It

- New Shapes and Sizes: A T-Tube Coronary Conduit** 1184
Ivor F. Galvin, FRCSI

Our Surgical Heritage

The First Successful Surgical Treatment of Mitral Stenosis: The 70th Anniversary of Elliot Cutler's Mitral Commissurotomy 1187

Lawrence H. Cohn, MD

Current Review

Barrett's Disease: Pathophysiology of Metaplasia and Adenocarcinoma 1191

Manuel Pera, MD, Victor F. Trastek, MD, Peter C. Pairolero, MD, Antonio Cardesa, MD, Mark S. Allen, MD, and Claude Deschamps, MD

Key References

Chest Trauma 1198

O. LaWayne Miller, MD, and J. Kent Trinkle, MD

Reports

Report of the Ad Hoc Committee on Physician-Specific Mortality Rates for Cardiac Surgery 1200

Practice Guidelines in Cardiothoracic Surgery: Bronchopulmonary Disease 1203

Correspondence

Presidential Address 1214

Vincent L. Gott, MD

Current Expectations in Cardiomyoplasty 1214

Reida M. El Oakley, FRCS

Cardioplegia Delivery During Continuous Normothermic Cardiopulmonary Bypass 1214

Richard S. Steyn, FRCS(Ed), Richard D. Page, FRCS(CTh), Graham A. Meadows, FRCA, Abbas Rashid, FRCS, and Brian M. Fabri, FRCS(Ed)

Reply

Ponangi V. Satyanarayana, MS, MCh, Podila Sita Rama Rao, MS, MCh, and Kesavaram Madhusudana Rao, BSc, CCP

Extended Vertical Transatrial Septal Approach for the Removal of Left Atrial Myxoma 1216

Vincenzo Stefano Luisi, MD, and Sergio Caparrotti, MD

Reply

Gerard M. Guiraudon, MD

Our Experience With Using the Pall LG6 Leukocyte Depleting Filter During Cardiopulmonary Bypass 1216

Khalid Al-Ebrahim, FRCSC, and Hussein Shafei, FRCS/CTh

When and Why CPD in Continuous Warm Blood Cardioplegia?	1217
Giorgio Noera, MD, PhD	

Esophageal Exclusion	1218
Rafael Andrade-Alegre, MD	

Reply

Romeo Bardini, MD, Luigi Bonavina, MD, Maurizio Pavanello, MD,
Massimo Asolati, MD, and Alberto Peracchia, MD

Device-Supported Myocardial Revascularization	1218
Endre Bodnar, MD, and Donald N. Ross, FRCS	

Pulmonology and Video Surgery	1219
Kenneth M. Moser, MD	

Valvular Disease in the Elderly: Influence on Surgical Results	1220
Stephen E. Fremes, FRCS(C), and Bernard S. Goldman, FRCS(C)	

Reply

Timothy J. Gardner, MD

Review of Recent Books

Cardiac Mechanical Assistance Beyond Balloon Pumping, edited by Susan J. Quaal, PhD, RN, CVS, CCRN	1116
Moisés Calderón, MD, and Raul Verdín, MD	

Current Topics in General Thoracic Surgery: An International Series. Volume 2: Perioperative Care, edited by R. M. Peters and J. Toledo	1183
Geoffrey M. Graeber, MD	

Announcements

Forthcoming Articles	A-28
Information for Authors	A-29, 30
Guidelines for the Submission of Electronic Manuscripts	A-31
Events of Interest	A-32, 33
Notice From the American Board of Thoracic Surgery	1073
The Society of Thoracic Surgeons: Thirtieth Annual Meeting	1100
Classified Advertisements	A-35, 36
Index to Advertisers	A-42

Number 5 November 1993 Supplement

Introduction	S69
Roque Pifarré, MD, and Todd K. Rosengart, MD	
Open Heart Operations in the Elderly: Changing Risk Parameters	S71
Roque Pifarré, MD	
Risk Analysis of Primary Versus Reoperative Coronary Artery Bypass Grafting	S74
Todd K. Rosengart, MD	
Perioperative Approaches to Coagulation Defects	S78
Kenneth M. Taylor, MD	
Is Intraoperative Echocardiography a Useful Monitor in the Operating Room?	S83
Michael D'Ambra, MD	
Cerebral Injury and Cardiac Operations	S86
Stephen A. Mills, MD	
Role of Cytokines in the Pathogenesis of Cardiopulmonary-Induced Multisystem Organ Failure	S92
Larry C. Casey, MD, PhD	

Number 6 December 1993

CCCETS Basic Science Lecture

Transplantation Tolerance	1221
David H. Sachs, MD	

Original Articles

Revascularization for Acute Regional Infarct: Superior Protection With Warm Blood Cardioplegia	1228
W. Stewart Horsley, MD, Joseph D. Whitlark, MD, James D. Hall, MD, John Parker Gott, MD, Pan-Chih, MD, Alice H. Huang, PhD, Youngja Park, PhD, Dean P. Jones, PhD, and Robert A. Guyton, MD	
Pediatric Cardiac Transplantation for Congenital Heart Defects: Surgical Considerations and Results	1239
Pascal R. Vouhé, MD, Daniel Tamisier, MD, Jérôme Le Bidois, MD, Daniel Sidi, MD, Philippe Mauriat, MD, Philippe Pouard, MD, Didier Lefebvre, MD, Sonia B. Albanese, MD, Wassim Khoury, MD, Jean Kachaner, MD, and Francine Leca, MD	
Initial Experience With Video-Assisted Thoracoscopic Lobectomy	1248
Thomas J. Kirby, MD, Michael J. Mack, MD, Rodney J. Landreneau, MD, and Thomas W. Rice, MD	

- Comparison of Balloon Valvuloplasty With Operative Treatment for Mitral Stenosis** 1254
 Jeffrey M. Cohen, MHS, Donald D. Glower, MD, J. Kevin Harrison, MD, Thomas M. Bashore, MD, William D. White, MPH, L. Richard Smith, PhD, J. Scott Rankin, MD, and David C. Sabiston, Jr, MD
- Hemodynamic Advantage of Left Atrial Epinephrine Administration After Cardiac Operations** 1263
 David A. Fullerton, MD, John A. St. Cyr, MD, PhD, James D. Albert, MD, and Frederick L. Grover, MD
- Cytomegalovirus Disease After Heart Transplantation: Is Acyclovir Prophylaxis Indicated?** 1267
 Charles C. Elkins, MD, William H. Frist, MD, J. Stephen Dummer, MD, James R. Stewart, MD, Walter H. Merrill, MD, Kelly A. Carden, and Harvey W. Bender, Jr, MD
- Growth Potential of the Transplanted Lung in the Infant Primate** 1274
 Donald D. Thomas, MD, Thomas A. Standaert, PhD, William R. Anton, BA, Debra R. Jones, BA, J. David Godwin, MD, Ganesh Raghu, MD, W. Alan Hodson, MD, and Margaret D. Allen, MD
- Reduction of Conjugated Dienes in Lung Transplantation: Effect of BN 52021** 1279
 Philip C. Corcoran, MD, Suzanne S. Tse, PhD, Nevin M. Katz, MD, Yining Wang, MD, James D. St. Louis, MD, Marie L. Foegh, MD, DSc, Ali R. Analouei, PhD, and Robert B. Wallace, MD
- Postoperative Pain-Related Morbidity: Video-Assisted Thoracic Surgery Versus Thoracotomy** 1285
 Rodney J. Landreneau, MD, Stephen R. Hazelrigg, MD, Michael J. Mack, MD, Robert D. Dowling, MD, David Burke, MD, Joseph Gavlick, PhD, Maureen K. Perrino, RN, Pamela S. Ritter, RN, Claudia M. Bowers, RN, Jennifer DeFino, Susan K. Nunchuck, PhD, Judith Freeman, MD, Robert J. Keenan, MD, and Peter F. Ferson, MD
- Right Latissimus Dorsi Cardiomyoplasty Augments Left Ventricular Systolic Performance** 1290
 Steven E. Park, MD, Brian L. Cmolik, MD, Robert R. Lazzara, MD, Dennis R. Trumble, MS, and James A. Magovern, MD
- Factors Predictive of Operative Mortality Among Coronary Artery Bypass Subsets** 1296
 Frederick L. Grover, MD, Randall R. Johnson, MS, Guillermo Marshall, PhD, Karl E. Hammermeister, MD, and Department of Veterans Affairs Cardiac Surgeons
- Operative Treatment of Pediatric Obstructive Hypertrophic Cardiomyopathy: A 26-Year Experience** 1308
 Christopher D. Stone, MD, Charles L. McIntosh, MD, PhD, Hani A. Hennein, MD, Barry J. Maron, MD, and Richard E. Clark, MD
- Myocardial Function in Early Hours After Coronary Artery Bypass Grafting: Comparison of Two Cardioplegic Methods** 1315
 Bonizella Biagioli, MD, Pierpaolo Giomarelli, MD, Gianni Gnudi, ED, Enrico Artioli, ED, Felicetta Simeone, MD, Giovanni Paolini, MD, Luca Marchetti, MD, and Adalberto Grossi, MD

- Indications for an Expandable Metallic Stent for Tracheobronchial Stenosis** 1324
Hiroaki Nomori, MD, Ryuichirou Kobayashi, MD, Kenichi Koderu, MD, Shojiro Morinaga, MD, and Kenji Ogawa, MD
- Endothelium-Dependent Relaxation in Pulmonary Arteries After Lung Preservation and Transplantation** 1329
Per Ola Kimblad, MD, Giorgio Massa, MD, Trygve Sjöberg, PhD, and Stig Steen, MD, PhD
- Reversal of Cardiac Allograft Rejection Without Immunotherapy: An Animal Model** 1335
Abigail K. Hanna, MD, and Verdi J. DiSesa, MD
- Phosphatidylcholine-Coated Chest Tubes Improve Drainage After Open Heart Operation** 1339
Steven Hunter, FRCS, and Gianni D. Angelini, FRCS
- Treatment of Peripheral Bronchopleural Fistulas With Endobronchial Occlusion Coils** 1343
Ronald B. Ponn, MD, Richard S. D'Agostino, MD, Harold Stern, MD, and Jack L. Westcott, MD
- Effects of Graded Reductions in Internal Mammary Artery Bypass Flow on Left Ventricular Function** 1348
Loren J. Harris, MD, Gregory A. Crooke, MD, Christopher L. LaMendola, MD, Eugene A. Grossi, MD, F. Gregory Baumann, PhD, and Rick A. Esposito, MD
- Acute Electrical Stimulation Increases Extramyocardial Collateral Blood Flow After a Cardiomyoplasty** 1351
John D. Mannion, MD, Michael G. Magno, PhD, Peter D. Buckman, MD, Fred DiMeo, BS, Richard Greene, Marvin Bowers, MD, Mary McHugh, MD, and Hyman Menduke, PhD
- Changes in Ventricular Geometry Early After Fontan Operation** 1359
Alvin J. Chin, MD, Wayne H. Franklin, MD, Beth Ann A. Andrews, BHS, RCVT, and William I. Norwood, Jr, MD, PhD
- Effect of Altering Pump Flow Rate on Cerebral Blood Flow and Metabolism in Infants and Children** 1366
Frank H. Kern, MD, Ross M. Ungerleider, MD, J. G. Reves, MD, Timothy Quill, MD, L. Richard Smith, PhD, Beatrice Baldwin, CRNA, Narda D. Croughwell, CRNA, and William J. Greeley, MD
- Improved Distal Circulatory Support for Repair of Descending Thoracic Aortic Aneurysms** 1373
Ludwig K. von Segesser, MD, Igor Killer, Rolf Jenni, MD, Ulrich Lutz, PhD, and Marko I. Turina, MD
- Heart and Lung Grafts Harvested En Bloc: Operative Technique, Utilization, and Results** 1381
Thomas J. Hinkamp, MD, Alvaro Montoya, MD, Mamdouh Bakhos, MD, Henry J. Sullivan, MD, Bradford P. Blakeman, MD, David B. Calandra, MD, James P. Houck, MD, William Gunnar, MD, Mark Stout, MD, Kathleen Siebold, RN, Barbara Walsh, RN, and Roque Pifarré, MD

Case Reports

-
- Resection of an Intracardiac Metastasis From Malignant Teratoma of the Testis** 1386
 Aonghus F. O'Donnell, FRCSI, Hassan A. Maghur, FRCS, Liam Grogan, MRCPI, Desmond Carney, FRCPI, and Eilis M. McGovern, FRCSI
- Primary Leiomyosarcoma of the Thoracic Aorta Presenting as a Contained Rupture** 1387
 John B. Steinberg, MD, Edward R. Johnson, MD, Jo Ann Benda, MD, and Louis A. Lanza, MD
- Thoracoscopic Resection of Pericardium for Symptomatic Congenital Pericardial Defect** 1390
 William H. Risher, MD, Andrew P. Rees, MD, John L. Ochsner, MD, and P. Michael McFadden, MD
- Complications of Retained Epicardial Pacing Wires: An Unusual Bronchial Foreign Body** 1391
 William H. Gentry, MD, and Abdul A. Hassan, MD
- Right Ventricle-to-Aorta Conduit in Pulmonary Atresia With Intact Ventricular Septum and Coronary Sinusoids** 1393
 Jenny E. Freeman, MD, Serafin Y. DeLeon, MD, Stephen Lai, MD, Elizabeth A. Fisher, MD, E. Phillip Ow, MD, and Roque Pifarré, MD
- Use of Retrograde Cold Crystalloid Cardioplegia in a Patient With Unexpected Cold Agglutination** 1395
 Mohammad Bashir Izzat, FRCS, Pala B. Rajesh, FRCS, and Geoffrey H. Smith, FRCS
- Anomalous Pulmonary Venous Drainage of the Right Lung** 1397
 Amram J. Cohen, MD, Jeffery E. Sell, MD, Robert P. Zurcher, MD, and Fred H. Edwards, MD
- Mixed Type of Total Anomalous Pulmonary Venous Connection With Hemi-Pulmonary Vein Atresia** 1399
 Yasuhisa Shimazaki, MD, Susumu Nakano, MD, Hiroshi Kato, MD, Shigeaki Ohtake, MD, Seiichiro Ikawa, MD, Takuya Miura, MD, Tetuya Sano, MD, Jun Arisawa, MD, and Hikaru Matsuda, MD
- Aortobronchial Fistula After Unilateral Lung Transplantation** 1402
 Steven J. Hoff, MD, Joyce E. Johnson, MD, and William H. Frist, MD
- Carcinoid Crisis After Biopsy of a Bronchial Carcinoid** 1403
 Riyadh Karmy-Jones, MD, and Eric Vallières, MD
- Congenital Absence of the Pericardium: Displacement of the Heart Associated With Tricuspid Insufficiency** 1405
 Jacques A. M. van Son, MD, PhD, Gordon K. Danielson, MD, and John A. Callahan, MD
- Successful Orthotopic Transplantation of a Fresh Tricuspid Valve Homograft in a Human** 1407
 Michele di Summa, MD, Enrico Donegani, MD, Giuseppe F. Zattera, MD, Stefano Pansini, MD, and Mario Morea, MD

How to Do It

Donor Lung Procurement: Assessment and Operative Technique 1409

Sudhir Sundaresan, MD, Gregory D. Trachiotis, MD, Motoi Aoe, MD,
G. Alexander Patterson, MD, and Joel D. Cooper, MD

Outflow Reconstruction of Tetralogy of Fallot Using a Gore-Tex Valve 1414

Masaaki Yamagishi, MD, and Hiromi Kurosawa, MD

Thoracoscopic Clipping of Patent Ductus Arteriosus in Premature Infants 1418

Rolf Förster, MD

Internal Mammary Artery for Arterial Pressure Monitoring After Pediatric Cardiac Operations 1421

Mark S. Slaughter, MD, Vibhu R. Kshetry, MD, Philip C. Smith, MD, and
John E. Foker, MD, PhD

Our Surgical Heritage

The First Transplantation of the Lung in a Human Revisited 1423

David A. Blumenstock, MD, and Carol Lewis, ScD, MPH

Current Review

Surgical Management of Aortic Valve Injury After Nonpenetrating Trauma 1426

René Prêtre, MD, and Bernard Faidutti, MD

Update

Early Dilation in the Treatment of Esophageal Disruption 1432

Mark B. Orringer, MD

Report

Practice Guidelines in Cardiothoracic Surgery: Congenital Heart Disease 1434*Correspondence*

Retrograde Low-Dilution Continuous Normothermic Blood Cardioplegia 1438

Tiziano Bianchi, MD

Reply

Steven R. Gundry, MD

Early Use of Internal Thoracic Artery 1438

Gil Hauer Santos, MD

Heart Surgery in Underdeveloped Countries: Success in Panama and Romania	1439
Allan M. Lansing, MD, PhD	
Surgical Difficulty in Localized Supravalvar Aortic Stenosis	1440
Ganga Prabhakar, FRCS, Naresh Kumar, FRCS, and Zohair Al-Halees, FRCSC	
<i>Reply</i>	
Richard B. Chard, FRACS, and Timothy B. Cartmill, FRACS	
Cardiac Operation in Patients After Completed Stroke	1440
Andrew S. Olearchyk, MD	
<i>Reply</i>	
Arthur C. Beall, Jr, MD, and James W. Jones, MD, PhD	
Coronary Sinus Cannulation: A Technique to Overcome an Obstructing Thebesian Valve	1441
Thomas J. Vander Salm, MD	
Platelet Function and Hypothermic Cardiopulmonary Bypass	1442
Gianfranco Lisi, MD, Guido Sani, MD, Massimo Maccherini, MD, Boninzella Biagioli, MD, and Michele Toscano, MD, PhD	
<i>Reply</i>	
Joachim Boldt, MD	
Erosion of Epicardium by Intrapericardially Placed ICD Patch	1443
William C. Feng, MD, Arun K. Singh, MD, Chester A. Chmielewski, MD, and Eric E. Berger, MD	
<i>SYMPOSIUM ON NEUROHUMORAL EFFECTS OF HYPOTHERMIA</i>	
International Symposium on Neurohumoral Effects of Profound Hypothermia in Infant Heart Surgery	1459
Introduction	1460
Anesthesia, the Brain, and Cardiopulmonary Bypass	1461
John M. Murkin, MD	
Effect of Deep Hypothermia and Circulatory Arrest on Cerebral Blood Flow and Metabolism	1464
William J. Greeley, MD, Frank H. Kern, MD, Jon N. Meliones, MD, and Ross M. Ungerleider, MD	
Review of Current Research at Boston Children's Hospital	1467
Richard A. Jonas, MD	
Cerebral Hemodynamics During Cardiopulmonary Bypass in Children Using Near-Infrared Spectroscopy	1473
Penny Fallon, MRCP, Idris Roberts, BSc, Fenella J. Kirkham, MRCP, Martin J. Elliott, FRCS, Adrian Lloyd-Thomas, FRCA, Richard Maynard, ACP, and A. David Edwards, FRCP	

Pulsatile Low-Flow Perfusion for Enhanced Cerebral Protection	1478
Takao Watanabe, MD, and Masahiko Washio, MD	
Transcranial Doppler Monitoring of Cerebral Perfusion During Cardiopulmonary Bypass	1482
Frederick A. Burrows, MD	
Cerebral Lactate Release After Circulatory Arrest but Not After Low Flow in Pediatric Heart Operations	1485
Jan van der Linden, MD, Rafael Astudillo, MD, Rolf Ekroth, MD, Michael Scallan, FRCA, and Christopher Lincoln, FRCS	
Low-Flow Cardiopulmonary Bypass and Cerebral Protection: A Summary of Investigations	1490
Julie A. Swain, MD, Richard V. Anderson, MD, and Michael G. Siegman, MD	
Protection of the Brain During Hypothermic Perfusion	1493
Hitoshi Mohri, MD, Mituaki Sadahiro, MD, Hiroji Akimoto, MD, Kiyoshi Haneda, MD, Koichi Tabayashi, MD, and Mikio Ohmi, MD	
Retrograde Cerebral Perfusion Using Pulsatile Flow Under Conditions of Profound Hypothermia	1497
Atsumi Mori, MD	
Cytokine Production and Hemofiltration in Children Undergoing Cardiopulmonary Bypass	1499
Ann B. Millar, MD, Lynne Armstrong, BSc, Jan van der Linden, MD, Neil Moat, MD, Rolf Ekroth, MD, John Westwick, PhD, Michael Scallan, FRCA, and Christopher Lincoln, FRCS	
Interaction Between Neutrophils and Endothelium	1503
Martin J. Elliott, FRCS, and Adam H. R. Finn, MRCP	
Humoral and Cellular Activation in a Simulated Extracorporeal Circuit	1509
Neil E. Moat, FRCS, Naomi Rebuck, BSc, Darryl F. Shore, FRCS, Tim W. Evans, PhD, and Adam H. R. Finn, MRCP	
Hemofiltration Modifies Complement Activation After Extracorporeal Circulation in Infants	1515
Svenerik Andreasson, PhD, Sylvia Göthberg, MD, Håkan Berggren, PhD, Anders Bengtsson, PhD, Elsa Eriksson, MD, and Bo Risberg, PhD	
Ultrafiltration and Modified Ultrafiltration in Pediatric Open Heart Operations	1518
Martin J. Elliott, FRCS	
<i>Review of Recent Books</i>	
Adult Cardiac Surgery, by Robert M. Bojar, MD	1338
Marshall D. Goldin, MD	
Current Issues in Heart Valve Disease. Thrombosis, Embolism, and Bleeding, edited by Eric G. Butchart and Endre Bodnar	1431
Reneé S. Hartz, MD	

Announcements

Information for Authors	A-35, 36
Guidelines for the Submission of Electronic Manuscripts	A-37
Events of Interest	A-39, 40
Forthcoming Articles	A-41
The Society of Thoracic Surgeons: Thirtieth Annual Meeting	1238, 1445
Notice From the American Board of Thoracic Surgery	1295, 1417
Correction	1444
Twenty-seventh Postgraduate Program, The Society of Thoracic Surgeons	1446
Program for the Thirtieth Annual Meeting of The Society of Thoracic Surgeons	1447
Classified Advertisements	A-43, 44
Index to Advertisers	A-46

Index to Volume 56

Author Index	1523
Subject Index	1546

